

SHOP talk

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Plant Operations Support Program

Summer 1998



Team Cleaning Gets Enthusiastic Nod at Bellevue Community College

A Facility Best Practice in Action

by Bob MacKenzie

Bellevue Community College was at a crossroads in 1997. Capital construction activity was at an all-time high and the college was under close scrutiny by an ever-watchful community. Instructor and classified staff were being asked to do more with less, maintenance resources were stretched to

the limit, complaints about campus cleanliness abounded and Rob de Grasse had just arrived from Canada to take the helm as Director of Campus Operations.

"It was clear that we (Campus Operations) had to adjust to a changing, challenging environment, and prove our value to the college," said de Grasse, by profession an industrial engineer. "But, we couldn't do it all at once, so we selected one of the most visible symbols of facility support — custodial operations."

A plus in de Grasse's favor was the full support of the college administration. Mr. de Grasse decided a radical change was needed if custodial operations were to remain an in-house, viable function. He had heard of "team cleaning" and immersed himself in trade and professional research on the topic. He was determined to avoid "re-inventing the wheel," and decided a consulting firm was the answer. Once armed with the fundamentals of the process, de Grasse shifted through reams of proposals and statements of qualifications before selecting a consulting firm that seemed to be apart from the pack.

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ESPC — Chances are it's right for you

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Hello Canada! B.C. joins consortium

"We chose Opus Consulting because they had a reputation for hands-on training and shepherding organizations through the transition process," de Grasse said. "Our custodial staff would have seen through the 'smoke and mirrors' types, so credibility was on the line."

Enter Opus Consulting and the *Team Cleaning for Health* regimen. Barry Moore is a cleaning consultant with Opus Consulting in Las Vegas. He was instrumental in implementing *Team Cleaning for Health* programs at Clark County Schools in Nevada, Syracuse District in Syracuse, New York, and other public schools and colleges around the country.

"The *Team Cleaning for Health* program leads to standardization of training, cleaning products, equipment and methods," said Moore. "Staff are turned into trained technicians and taught the best way to complete specific tasks, including disinfecting surfaces, dusting, restroom sanitizing, floor care and vacuuming."

To lead, you must first learn

Bellevue's 16 custodians were treated to a rare sight during the three-month transition phase — their Director of Campus Operations working by their side.

"I had to learn their tasks to recognize how we could do our jobs better," said de Grasse. "The transition provided an excellent opportunity to get to know the staff and to appreciate the challenges they routinely encounter."

Mr. de Grasse's efforts to build morale and cohesion did not go unnoticed. The custodial crews knew he was working with them during graveyard shift and still performing his other operations duties during the day.

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Municipalities and School Districts Sign onto Innovative 'Statewide Energy Savings Performance Contract'

Dozens of cities, school districts and counties have affirmed their intent to sign onto a new initiative to promote energy efficiency projects in Washington State. General Administration has launched the program to benefit municipalities – cities, counties, school districts, ports and other districts.

The program is the first of its kind in the nation and seeks to simplify energy savings projects through the use of performance contracting as a state contract. The program is patterned after the U. S.

Department of Energy's Super Energy Savings Performance Contracting (ESPC) program that was developed for federal facilities. Project costs such as lighting and heating upgrades are paid from the energy savings guaranteed by an Energy Services Company (ESCO).

"The ESPC can be a 'risk free' way of acquiring new energy efficient equipment without using scarce capital dollars," said Ray Anderson, energy manager in GA's Division of Engineering and Architectural Services. "Municipalities will find it in their best interests to beat the crowd and take advantage of this program today!"

In an article in the Pacific Northwest Energy Conservation & Renewable Energy newsletter, Anderson shared the following points:

- Although Washington's state agencies have extensively used ESPC since the 1980s, municipalities have rarely taken advantage of this

efficiency strategy.

- GA is trying to do the bureaucratic stuff so that municipalities can jump right in and hire an ESCO, complete the audits, negotiate and get the work done.
- The potential savings in annual energy bills is large, an average 20 percent.
- Washington is the first state to establish this type of program to improve infrastructures while allowing tax dollars to be spent on other needs.
- The targets include lighting, HVAC, control systems and water conservation.
- Joint venture projects can be put together, making a package deal. These can involve partnerships among schools and local governments to package together a group of smaller projects in one geographical area – ideal for rural situations.

For questions and program materials, contact Karen Purtee at GA at kpurtee@ga.wa.gov or (360) 902-7194

The Plant Operations Support Consortium

New members appear in green and renewing members are listed in gray type.

Welcome and thanks on behalf of the consortium!

Universities/Colleges

Cascadia/UW-Bothell
Bellevue CC
Big Bend CC
Clark College
Edmonds CC
Highline CC
Lower Columbia CC
Shoreline CC
Spokane, Dist. 17
South Seattle CC

Municipalities

City of Tukwila
Clark County
Lewis County
Pierce County
Whatcom County

Canada

Attorney General
Delta School District

Ports

Port of Anacortes
Port of Edmonds
Port of Ephrata
Port of Longview
Port of Ridgefield
Port of Sunnyside

School Districts

Anacortes
Cascade
Columbia-Burbank
Enumclaw
Federal Way

Issaquah

Ketchikan, Alaska
Marysville
Mukilteo
North Thurston
Oak Harbor
Peninsula
Renton
Snohomish
University Place

States

Alaska
Oregon
Utah

Washington State Agencies

Corrections
Ecology
General Administration
Health
Information Services
Labor & Industries
Liquor Control Board
Military
Natural Resources
Parks & Recreation Commission
School for the Deaf
Social & Health Services
Transportation
Veterans Affairs
Washington State Patrol

Attention Karen Purtee

Shop Talk Mail List

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**and follow the
prompts!**



Shop Talk is a quarterly publication of the Plant Operations Support program. The newsletter is intended to be an informative and operationally-oriented medium for public facilities managers. Contents herein are also available on the program's web site at www.ga.wa.gov/plant/plantops.htm

We welcome feedback on the newsletter's contents and input from readers. We reserve the right to edit correspondence to conform to space limitations. Bob MacKenzie is program manager and editor (360) 902-7257 or e-mail bmacken@ga.wa.gov. Karen Purtee serves as editorial assistant. Plant Operations Support does not make warranty or representation, either expressed or implied, with respect to accuracy, completeness or utility of the information contained herein. Plant Operations Support assumes no liability of any kind whatsoever resulting from the use of, or reliance upon, any information contained in this newsletter. Department of General Administration, PO Box 41012, Olympia, WA 98504-1012. Marsha Tadano Long, Director.

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Professional Development Events Beckon Facility Managers

POS Co-Sponsors October IAQ Symposium

The Plant Operations Support consortium has joined a host of industry and government groups to co-sponsor **Cleaning for a Healthy Environment**, scheduled for October 15-17, 1998 at the DoubleTree Inn at Southcenter Mall, Seattle. Well-chosen cleaning products and protocols, combined with sensible steps to exclude soil from a building, can both reduce cleaning costs and reduce levels of particulates, volatile organics and microbial pollutants. This symposium brings together building owners and managers, environmental health specialists and the cleaning industry in an interactive format.

"This promises to be an illuminating event and will provide operationally-oriented solutions to the vexing problems of maintaining adequate indoor air quality," said Susan Smith, director of the Mid Atlantic Environmental Hygiene Resource Center (MEHRC). "We welcome the Plant Operations Support consortium and look forward to lively exchanges with its members."

Topics include "Cleaning Research," "Economics of Cleaning for Health", "Health Concerns, Standards and Guidelines, and Consumer Education," and "Cleaning for Children: School and Day Care Environments." The program is supported primarily by fees charged attendees. POS members can attend for the event for a reduced rate of \$245. Contact MEHRC at 215-387-4096, FAX 215-387-6321 or visit their web site at www.libertynet.org/mehrc/registration.htm

Videoconference to Explore Facility Manager Training, Certification

The latest installment of the Plant Operations Support professional

development series will be a videoconference on the topic *Facility Manager Training and Certification* scheduled from 9:00 a.m. to 11:00 a.m., Thursday, October 1, 1998. The free videoconference will utilize up to ten sites statewide.

"This is a critical topic affecting all public facility staff," said Bob MacKenzie, POS manager. "Members constantly report how private industry is hiring their technicians away, and ask why there are so few training and certification opportunities for staff?"

The two-hour videoconference will explore cost-effective training programs, how partnerships can be developed with local community and technical colleges, and other certification possibilities. Members are asked to "spread the word" about the free event, "so that we can learn from each other's efforts and maximize this regional communication capability," said MacKenzie.

Videoconference specifics will be published in Fall **ShopTalk** and will appear on the POS website at <http://www.ga.wa.gov/plant/planto ps.htm>. The conference will utilize the services of Washington Interactive Technologies. Members may register for a site near them by contacting Karen Purtee (360) 902-7194 or via e-mail: kpurtee@ga.wa.gov

Building Operator Certification Course Offered in Tri-Cities

The Northwest Energy Efficiency Council (NEEC) is opening registration for Building Operator Certification (BOC) training courses in the Tri-Cities area this month. BOC courses provide professional certification for staff who operate and maintain commercial and public buildings. Participants attend seven courses in energy efficient building systems maintenance, complete testing and in-facility projects, and receive



Building Operator Certification from NEEC.

BOC certification is recognized in Washington, Oregon, Idaho and Montana. Participants have included operations and maintenance staff from the U.S. Navy, Boeing, school districts, state & city government facilities, and private commercial buildings. BOC is endorsed by the Plant Operations Support program and the Washington State Department of General Administration. GA sponsored a BOC series recently in Olympia.

"Nearly 300 building O&M staff are currently enrolled to become certified," says Cynthia Putnam, BOC project manager. "This year's goal is to certify 50 or more participants."

To meet the growing demand, NEEC will be offering BOC certification courses in locations throughout Washington and Oregon to include Everett, Kent, Olympia, Portland, Medford, and the Tri-Cities.

"This is a course that can be put to immediate use by successful graduates," says Putnam. "Participants are exposed to all major components of building operations."

BOC courses in the Tri-Cities start Thursday, September 24. Classes are held once a month through Thursday, April 8, 1999. Registration closes on Thursday, September 10.

To request a registration form, contact Cynthia Putnam BOC Project Manager, at cmputnam@aol.com or 206-292-3977, or your local utility representative: • Nancy Philipp, Benton PUD, 509-582-1269 Darroll Clark, Franklin PUD, 509-546-5944 Jeff McCullough, City of Richland, 509-942-7438

Winner's Corner

Washington Guard Nabs Top Energy Award

Cost avoidance tops \$1 million

The Washington Army National Guard (WAARNG) is one of two to receive the Annual Secretary of the Army's Energy and Water Management Award for fiscal year 1998. The WAARNG was selected for energy conservation measures that included two lighting retrofit projects, installation of two energy management control systems (EMCS), and the results of an active outreach program to educate and share successful ideas with other organizations.

"This is a very prestigious award", says Emory Lehman, the WAARNG Facility Management Officer, "Our Facility Operations and Maintenance Office has done a great job in dramatically reducing energy costs and managing overall energy consumption, adding up to millions of dollars in cost avoidance".

Energy management control systems were installed at Kent, Washington and the

Yakima Training Center Armories. These installations are part of an on-going WAARNG program to install EMCS in all independent facilities. Currently, forty-one systems have been installed. EMCS provides direct digital control of heating and air conditioning systems, local and remote control, resulting in millions of btu consumption reduction and significant cost reductions. Since 1991, EMCS installations have cost approximately \$435,500. Actual cost avoidance over the base years (1989-1991) was \$535,672 during the 1993-1995 biennium. Cost avoidance in utility bills since the program's inception exceeds \$1 million. Additionally, the WAARNG has conducted lighting retrofits and started energy conservation programs in several buildings significantly improving customer satisfaction and reducing energy consumption.

Finally, the Facility Operations and Maintenance Office under the leadership of Bob Green, Assistant Director for Facility Operations and Maintenance, has continuously conducted an outreach program to share the WAARNG's success in energy management and facility maintenance programs.

Green and Production Control Chief John Carlton represented the WAARNG in July at a Pentagon ceremony with the Secretary of the Army to recognize their achievements in energy management. The WAARNG has also been selected to compete against the rest of the Department of Defense (Navy, Marines, Air Force, Coast Guard, etc.) for selection in the fiscal year 1998 Secretary of Defense Energy and Water Management award later this summer.

State Facilities Program Wins National 'Innovation' Award

The Department of General Administration's "Level the Field and Win: Highest and Best Use Analysis Program" was awarded an Honorable Mention in the National Association of State Facilities Administrators (NASFA) annual Innovation Award competition.

The award was presented at NASFA's annual awards dinner in Scottsdale, Ariz., June 30, 1998. The program recognized in the competition was headed by Bill Phillips, former deputy assistant director in GA's Division of Engineering and Architectural Services (EAS). Phillips has since been named the Assistant Director of Department of Corrections' Engineering, Facilities and Capitol Projects Office

corrections team for their continued efforts to save taxpayer dollars, while optimizing limited resources."

The "Level the Field and Win" project was a highest- and best-use study by GA of all Department of Corrections facilities (prisons, work camps, etc.) which creatively adapted a successful private-sector methodology for use by public agencies. Department of Corrections has realized millions in savings as result of the methodology. GA's honorable mention award was one of only four programs nationwide recognized in the 1998 competition.

"This prestigious award recognizes innovation and dedication by a talented group of professionals," said Fred King, assistant director of EAS.

"Congratulations to Bill and the

Member Spotlight

Welcome British Columbia!

Delta's Maintenance Manager in Candid Interview



Delta School District extends to the U.S. border at Point Roberts.

Delta — one of British Columbia's largest school districts — is the first Canadian public school district to join the Plant Operations Support program. (**British Columbia's Ministry of Attorney General was the first Canadian government agency to join and will be profiled in Fall Shop Talk. Editor**) Delta School District serves a population of some 100,000 residents in and around the delta of Western Canada's famous Fraser River. Delta's 19,000 students come from the communities of North Delta, Ladner and Tsawwassen (which borders the United States at Point Roberts). Rand Mackenzie is the Maintenance Manager of Delta School District and was interviewed by **Shop Talk** Intern Steve Lynch recently.

Shop Talk: What is the size of your staff?

Mackenzie: We have 50 full-time maintenance personnel and about 120 custodians. Our Building Maintenance staff

doubles in summer to about 80 or 90 people for off-season maintenance and minor renovation projects.

Shop Talk: What are some of the challenges of maintaining a school district the size of Delta?

Mackenzie: We're fairly typical of Canadian and American school districts. We contend with budget cutbacks, trying to do more with less, etc. We do most of our work (including renovations) in-house, and add staff as needed. This summer we are using \$500,000 to renovate four schools and are spending \$1,250,000 on roofing. We are also in a process of reviewing and changing our maintenance practices, starting with a new preventive maintenance program. This is my first year here so I've had to concentrate on getting to know the staff and district, as well as taking a serious look at changes we can make to the more effective in processes and procedures. We had a fire last July, the sixth week I was here, which took out two-thirds of an elementary school. With our own staff we managed to get the school up and running for the first week of September!

Shop Talk: What types of facilities do you manage?

Mackenzie: Some of our facilities are fairly complex, but nothing like a high rise apartment building or a large factory. Our largest school has a student population of

1400. We utilize direct digital building management controls in many of our buildings. We have converted an industrial steel fabricating shop into a multi-use trades shop for use by our trades.

Shop Talk: How did you become involved with plant operations?

Mackenzie: I've been involved with plant operations since 1981. I started with a background as an electrician/electrical technician/contractor when I went to work for Prince George District. From there to a national department store chain, then to the City of Vancouver in their Building Management Department before starting with Delta. There is never a dull moment in this field and I enjoy the challenge. There is always a full day.

Shop Talk: How do you see the Plant Operations Support program enhancing yours?

Mackenzie: We hope that establishing contacts with those who have similar sorts of problems will make solving our problems easier and enhance our network with the British Columbia School Plant officials Association. It is a great benefit every time you can get assistance from others. We will try to get the whole staff to take advantage of what your program has to offer. I've been lucky to fall into a very good staff that is very energetic.

State Creates Year 2000 Facilities Resource Office

Washington State agency directors and elected state officials are quickly learning about the Year 2000 embedded chip problem and the potential for disruption to their vital services. Vital services are those that might affect public health and safety, payment of benefits, or accountability for public resources.

The newly-created General Administration (GA) Year 2000 Program Office recently asked all state agencies to identify their vital services and focus their efforts on mitigating any date change problems with the systems and equipment that support these services. Each agency must assess their vital services and prepare plans to mitigate any possible disruption. Other agency services may be mission critical or supportive and need attention too.

The GA Year 2000 Program Office has pilot projects underway now to test program methodologies and approaches. Experiences from these pilot projects will contribute to a workbook that will guide state agencies through the process of identifying vital services and systems and equipment necessary to delivery those services. Embedded chip risk assessments will then be conducted in the fall.

Other divisions at GA are identifying contractors to provide a variety of Year 2000 related services quickly and easily to all agencies. For instance, the Office of State Procurement is creating a master list of firms interested and capable of providing services in year 2000 audit, assessment and testing. The Division of Engineering and Architectural Services is augmenting its

master list of vendors by identifying those capable of providing remediation services (design and construction) for public works projects that result from the risk assessments and plans.

"Washington State plans to make a smooth transition to the year 2000 by focusing first on the most important things to be done," said Julie Boyer, Y2K embedded chip program manager. "With these things accomplished, the millennium date change should not affect vital services that we all take for granted in our state."

Need help in getting ready? Contact Julie Boyer, (360) 664-2197 or Greg Lee, (360) 664-2164, GA Year 2000 Program Office, 1063 Capital Way, Suite 210, PO Box 41019, Olympia, WA 98504. Fax (360) 664-2172. E-mail jboyer@ga.wa.gov or Glee@ga.wa.gov.

Cleaning (continued from page 1)

"It's a new concept to see our boss out learning our job and we knew it was tough on him and his family," said custodians at a recent meeting. "But, he's enabled us to show our stuff and increase our communication between and among our sections."

Standardization

Implementing a *Team Cleaning for Health* strategy allows organization custodial sections to accomplish more cleaning in less time with fewer products, said Opus' Barry Moore. Standardized equipment includes compact backpack vacuums with four-stage filtration systems that contain 96 to 99 percent of dust particulate vacuumed. In addition to promoting cleaner air, the vacuums offer greater maneuverability than traditional uprights and minimize operator fatigue. The many cleaning products used by the Bellevue custodial section were replaced with three standardized liquid products in pre-measured packets: a bowl cleaning solution, a disinfectant and a general purpose cleaner. Three standardized floor care products round out the *package approach*.

Team Cleaning Approach

"Initially there was a problem with people set in their ways," said John McDonald, one of two lead custodians and a trainer. "Change scares people, but the change we've seen with Team Cleaning has been dramatic and positive."

Individual tasks were broken down and approached as a team concept, McDonald explained. "This 'production' method of cleaning has resulted in marked productivity improvement and increased appreciation by students and faculty."

The cleaning approach goes something like this. A primary technician goes into a classroom or office first. That person sanitizes the doorknobs and glass, empties pencil sharpeners, dusts everything, disinfects the sinks and counters and picks up any large papers or trash. Next, the floor technician vacuums all the classrooms and offices, using a backpack vacuum that helps purify the air. The sanitizing technician cleans and disinfects water fountains and in the restrooms sanitizes all doorknobs, handles, mirrors, fixtures, lavatories, seats and floors.



Team Cleaning Trainer Karl Laubenstein (l), and Custodial Lead Josue Holguin (in background holding mop handle), explain the proper use of floor cleaning equipment to Custodian Mohammed Gibrel (in white shirt.) Team Cleaning enables crews to complete detailed cleaning more often and more effectively. Photo by Bob MacKenzie.

"At the end of the night, we have detail, or multi-purpose time, when everybody comes together to clean common areas such as hallways and fitness centers," said Karl Laubenstein, one of Bellevue's four Team Cleaning trainers. "We know precisely how long it takes to do a certain task and exactly how much it costs."

The price of chemicals also has gone down "because we're able to buy more in concentrated form," said Laubenstein. The use of the "portion pack" method has resulted in greater safety and better use of limited resources a number of custodians agreed.

Productivity Enhanced, Proof Positive!

Mr. de Grasse has maintained startlingly-accurate records of productivity improvement. He will use these results in budget development efforts and to justify his groups' value to the college.

Before

Prior to initiating team cleaning it took 16 custodians 115.2 hours to complete their nightly tasks (at 7.2 hours per custodian). Collective tasks such as floor stripping and heavy cleaning had to done on a "catch can" basis and usually cost additional time and money.

After

With the same number of custodians, it only takes 40.7 hours to complete the same tasks using Team Cleaning. The remaining, "leftover" time (74.5 hours) is used to perform "multipurpose" cleaning such as detail work and deep cleaning. These were the collective tasks previously completed once every six months or so. Now, they can be a part of a nightly

regimen, resulting in cleaner facilities and evoking immediate, positive responses from students, faculty and administrators.

The time saved results in an equivalent of 10.42 new custodians (74.5hrs / 7.2 hrs/custodian = 10.42 custodians)! The savings will be funneled back to the crews in many ways, including "lead worker" incentives, training opportunities and better equipment.

The equivalent number of dollars injected into the labor pool equals 18,774 labor hours per year, times \$16.31 per hour, or \$306,204.00 savings per year. **(Editor's note: Plant Managers usually see similar savings only in their dreams!)**

"These numbers do not include the savings on supplies and materials needed to clean the areas, which are significant," said de Grasse. "Morale, productivity, efficiency and effectiveness have all been enhanced by a transition to a pro-active, team cleaning approach."

If you have an opportunity to visit Bellevue Community College, you will notice the outside steps are clean and the hallways glisten. The college's restrooms are universally well maintained and the classrooms are ready for their educational functions by 7:00 a.m. The costs of transition to Team Cleaning are expected to be recaptured within six months. The custodial staff at Bellevue has a message for the Plant Operations Support consortium: "Don't re-invent the wheel, learn from our experiences and enhance your staff's effectiveness and value."



Campus Operations Director Rob de Grasse uses a Super Coach backpack vacuum under the expert eye of Team Cleaning Trainer Jude Nnanabu. Photo provided courtesy of Bellevue Community College.

For more information about Team Cleaning, contact the Plant Operations Support program (360) 902-7257.